AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) Simulation process of a radiofrequency scenario starting from generation of serial messages including information for obtaining a phase-modulated radiofrequency test signal comprehensive of channel impairments, including co-channel interference, which is sent to the input of a receiver under test whose output is monitored, the process comprising:

- executing N×P digital modulation of a base band carrier, for obtaining P groups of N base band isofrequential digital replicas of said phase-modulated carrier, P being chosen from 1 to a maximum number M of modulated carriers fitting an assigned band of the receiver under test, and N being a number of independent inputs of said receiver;
- digitally multiplying, for every P groups of N replicas, each base band replica by a respective complex constant assigned to the group, the numerical order of the replicas and the phases of the multiplicative constants both increasing gradually in successive products, for beamforming each of the P groups of N replicas according to a desired arrival direction of the P groups for simulation;
- adjusting the power level of each of the P groups of N replicas;
- digitally multiplying each beamformed group of N replicas by a relevant digital intermediate frequency carrier which carries out frequency conversion of the group at a respective

intermediate frequency, thereby establishing for each intermediate frequency converted beamformed group a relative position inside the broad band of the receiver under test;

- summing the P intermediate frequency converted replicas having the same order in each beamformed group, for obtaining N broad band intermediate frequency replicas;
- executing analogue conversion of the N broad band intermediate frequency replicas and filtering broad band the analogue replicas for reconstruction;
- executing radiofrequency conversion, amplification and filtering of the reconstructed analogue replicas for obtaining N broad band radiofrequency replicas constituting a single test signal suitable for testing the operation of a directional receiver;
- application of the N broad band radiofrequency replicas directly to N radiofrequency inputs of the receiver under test, each radiofrequency input bypassing an associated antenna.

2. (Previously Presented) Simulation process of radiofrequency scenario according to claim 1, wherein the content of said serial messages is read from general tables of parameters and options defining a scenario concerning at least one useful transmission signal and one or more isofrequential interferent signals, having simulated arrival directions generally different from those of said relevant useful signals.

3. (Previously Presented) Simulation process according to claim 2, wherein said general tables constitute a sequence of K tables cyclically read.

4. (Previously Presented) Simulation process according to claim 3, wherein operative phases of the simulation process form a sequence repeated at time intervals of the same duration, intermittently using said messages obtained converting a new general table of said cyclic sequence, thus giving dynamic and recurrent characteristics to said simulated scenario.

5. (Previously Presented) Simulation process according to claim 4, wherein said equal duration of the time intervals is such that a variation speed of the contents of said messages is similar to the one that can be detected in the corresponding said parameters of a real scenario.

6. (Previously presented) Simulation process according to claim 5, wherein said duration is equal to, or lower than 4.61 ms.

7. (Previously Presented) Simulation process according to claim 4, wherein said general tables are updated during the testing time, and corresponding updated messages are generated in synchronous mode compared to said sequential time intervals.

8. (Previously presented) Simulation process according to claim 4, further comprising an additional acquisition phase of the results of said testing, in asynchronous mode compared to said sequential time intervals.

9. (Previously Presented) Simulation process according to claim 2, wherein selection of some of said options of said

general tables involves the compilation of relevant sub-tables containing additional parameters to select for the selected options.

10. (Previously presented) Simulation process according to claim 4, wherein said carriers are time division multiplexed, and each of said sequential time intervals of the same duration corresponds to a frame time.

11. (Previously Presented) Simulation process according to claim 2, wherein said general tables also include parameters that take into account the presence of noise, a doppler effect due to the speed of mobiles, and the quick and sudden fading of a received electromagnetic field, caused by multiple paths destructive interference or by masking by obstacles encountered by mobiles in movement.

12. (Previously Presented) Testing system of a radiofrequency receiver, including a control processor for generating serial messages directed to orthogonal modulation and frequency conversion devices controlled by the content of said messages for generating a phase-modulated radiofrequency test signal comprehensive of channel impairments, including co-channel interference which is sent to a receiver under test whose output is monitored, the testing system comprising:

- NxP digital modulators of a self-generated base band carrier, for obtaining P groups of N base band isofrequential digital replicas of said phase-modulated carrier, P being chosen from 1 to a maximum number M of modulated carriers fitting an assigned band of the receiver under test (DUT), and N being a number of independent inputs of said receiver;

- N×P first digital multipliers arranged for multiplying, for every P groups of N replicas, each base band replica by a respective complex constant assigned to the group, the numerical order of the replicas and the phases of the multiplicative constants both increasing gradually in successive products, for beamforming each of the P group of N replicas according to a desired arrival direction of the P groups for simulation;
- means for adjusting a power level of each of the P groups of N replicas;
- N×P second digital multipliers for multiplying each beamformed group of N replicas by a relevant digital intermediate frequency carrier which carries out frequency conversion of the group at a respective intermediate frequency, so establishing for each intermediate frequency converted beamformed group a relative position inside the broad band of the receiver under test;
- N digital adding means for summing up all the P intermediate frequency converted replicas having the same order in each beamformed group, for obtaining N broad band intermediate frequency replicas;
- N digital/analogue conversion means of said N broad band intermediate frequency replicas followed by broad band filtering means for reconstructing the analogue replicas;
- N radiofrequency mixers of said N broad band reconstructed analogue replicas for obtaining N broad band radiofrequency replicas;
- N radiofrequency amplifiers for amplifying said radiofrequency replicas and orderly sending said amplified radiofrequency

replicas to N radiofrequency outputs of the testing system, where the radiofrequency replicas constitute a single test signal suitable for testing the operation of a directional receiver;

- a whole of N coaxial cables, or equivalent means, connecting said N radiofrequency outputs to a same number of inputs of said receiver, without antenna.

13. (Previously Presented) Testing system according to claim 12, wherein the intermediate frequency converted beamformed groups, each of N replicas, are generated by means of P identical digital modules, each including a dedicated processor interface communicating with N digital modulators, N first digital multipliers, and N second digital multipliers; the whole digital modules being connected to N buses for transferring the N broad band intermediate frequency replicas towards as many digital to analogue converters, through a binary tree of N two-inputs digital adders.

14. (Previously Presented) Testing system according to claim 12, wherein said control processor transfers to interface means said control messages at sequential time intervals of identical duration.

15. (Previously Presented) Testing system according to claim 14, wherein said identical duration of the sequential time intervals is such that a variation speed of the contents of said messages is similar to that which can be detected in corresponding parameters of a real scenario.

16. (Previously Presented) Testing system according to claim 12, wherein said messages are obtained from the conversion of general tables of parameters and options defining a simulated scenario, stored into said control processor.

17. (Previously Presented) Testing system according to claim 16, wherein said general tables are organized in a sequence of K tables cyclically repeated.

18. (Previously presented) Testing system according to claim 14, wherein said duration is equal to or lower than 4.61 ms.

19. (Previously Presented) Testing system according to claim 16, wherein said general tables are filled in before the testing and updated during the testing, and the corresponding updated messages are generated in synchronous mode compared to said sequential time intervals.

20. (Previously Presented) Testing system according to claim 14, wherein said carriers are time division multiplexed and said duration corresponds to a frame time.

21. (Previously Presented) Testing system according to claim 16, wherein said general tables include also parameters to simulate the presence of noise, a doppler effect due to the speed of ~~the~~ mobiles, and the quick and sudden fadings of a received electromagnetic field, caused by destructive interference by multiple paths or by masking by obstacles encountered by the mobiles in movement.

Claims 22-30 (Canceled)